

CURRICULUM VITAE - *Stefan M. Sievert*

Stefan M. Sievert

Associate Scientist w/ Tenure

Biology Department

Stanley W. Watson Laboratory

Mailstop 52

Woods Hole Oceanographic Institution

Woods Hole, MA 02543

Telephone: 508-2892305

Fax: 508-4572076

E-mail: ssievert@whoi.edu

>>[Lab website](http://www.whoi.edu/groups/sievertlab)

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(a) PROFESSIONAL APPOINTMENTS

Associate Scientist w/ Tenure, Woods Hole Oceanographic Institution (WHOI), since 2012

Associate Scientist w/o Tenure, WHOI, 2007 – 2012

Assistant Scientist, WHOI, 2002 – 2006

(b) ACADEMIC PREPARATION

Postdoctoral Scholar, WHOI, 2000 – 2002

Postdoctoral Investigator, MPI for Marine Microbiology, Bremen, Germany, 1999 – 2000

University of Bremen, Germany, Microbial Ecology, Ph.D., 1999

University of Bremen, Germany, Biological Oceanography, M.S. (Diplom), 1996

Visiting graduate student (Fulbright Grantee), University of Washington (WA), 1992/1993

Johannes Gutenberg-University, Mainz, Germany, Biology, B.S. (Vordiplom), 1990

(c) Awards

2017 Tenured Associate Scientist Award, WHOI

2015 Invited professorship at the Université Pierre et Marie Curie (Paris VI)

2010 Senior Fellowship of the Alfred Krupp Wissenschaftskolleg Greifswald (Institute for Advanced Studies), Greifswald, Germany

2004 Fellowship of the Hanse Wissenschaftskolleg (Institute for Advanced Studies), Delmenhorst, Germany

2000 Postdoctoral Scholar Award in Ocean Science and Engineering, WHOI

1992 Fulbright Scholarship, visiting graduate student at the School of Oceanography, University of Washington, Seattle, WA, sponsor: Prof. John A. Baross

(d) SELECTED PUBLICATIONS (out of a total of 58)

Le Bris, N., M. Yücel, A. Das, **S. M. Sievert**, L. PonnaPakkam, P. R Girgius. 2019.

Hydrothermal energy transfer and organic carbon production at the deep seafloor. *Frontiers in Marine Science*. 5:531

Götz F., P. Pjevac, S. Markert, J. McNichol, D. Becher, T. Schweder, M. Mussmann, **S. M. Sievert**. 2019. Transcriptomic and proteomic insight into the mechanism of

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- cyclooctasulfur- versus thiosulfate-oxidation by the chemolithoautotroph *Sulfurimonas denitrificans*. *Environmental Microbiology*. 21:244-258
- McNichol, J., H. Stryhanyuk, S. P. Sylva, F. Thomas, N. Musat, J. S. Seewald, and **S. M. Sievert**. 2018. Primary productivity below the seafloor at deep-sea hot-springs. *Proceedings of the National Academy of Sciences of the United States of America* 115:6756-6761
- Signori, C. N., V. H. Pellizari, A. Enrich-Prast, and **S. M. Sievert**. 2018. Spatiotemporal dynamics of marine bacterial and archaeal communities in surface waters off the northern Antarctic Peninsula. *Deep-Sea Research Part II*. 149:150-160
- McNichol, J., S. P. Sylva, Fr. Thomas, C. D. Taylor, **S. M. Sievert**, and J. S. Seewald. 2016. Assessing microbial processes in deep-sea hydrothermal systems by incubation at in situ temperature and pressure. *Deep-Sea Research Part 1* 155:221-232
- He, Y., M. Li, V. Perumal, X. Feng, J. Fang, J. Xie, **S. M. Sievert**, F. Wang. 2016. Genomic and enzymatic evidence for acetogenesis among multiple lineages of the archaeal phylum Bathyarchaeota widespread in marine sediments. *Nature Microbiology* 1, Article number 16035
- Gulmann, L. K., S. E. Beaulieu, T. M. Shank, K. Ding, W. E. Seyfried, and **S. M. Sievert**. 2015. Bacterial diversity and successional patterns during biofilm formation on freshly exposed basalt surfaces at diffuse-flow deep-sea vents. *Frontiers in Microbiology – Extreme Microbiology*, 6:901
- Zhang Y., and **S. M. Sievert**. 2014. Pan-genome analyses identify lineage- and niche-specific markers of evolution and adaptation in *Epsilonproteobacteria*. *Frontiers in Microbiology - Evolutionary and Genomic Microbiology*, 5:110
- Yücel, M., **S. M. Sievert**, C. Vetriani, D. I. Foustoukos, D. Giovannelli, and N. Le Bris. 2013. Eco-geochemical dynamics of a shallow-water hydrothermal vent system at Milos Island, Aegean Sea (Eastern Mediterranean). *Chemical Geology* 356:11-20
- Sievert S. M.**, and C. Vetriani. 2012. Chemoautotrophy at deep-sea vents: Past, Present, and Future. *Oceanography Magazine* 25(1): 218-233
- Xie W., F. Wang, L. Guo, Z. Chen, **S. M. Sievert**, J. Meng, G. Huang, Y. Li, Q. Yan, S. Wu, X. Wang, S. Chen, G. He, X. Xiao, and A. Xu. 2011. Comparative metagenomics of microbial communities inhabiting deep-sea hydrothermal vent chimneys with contrasting chemistries. *ISME Journal* 5:414-426
- Hügler M., J. M. Petersen, N. Dubilier, J. F. Imhoff, and **S. M. Sievert**. 2011. Pathways of carbon and energy metabolism of the epibiotic community associated with the deep-sea hydrothermal vent shrimp *Rimicaris exoculata*. *PLoS One* 6(1): e16018
- Hügler M., **S. M. Sievert**. 2011. Beyond the Calvin Cycle: Autotrophic Carbon Fixation in the Ocean. *Ann. Rev. Mar. Sci.* Vol. 3:261-289

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Sievert S. M., K. M. Scott, M. G. Klotz, P. S. G. Chain, L. J. Hauser, J. Hemp, M. Hügler, M. Land, A. Lapidus, F. W. Larimer, S. Lucas, S. A. Malfatti, F. Meyer, I. T. Paulsen, Q. Ren, J. Simon, and the USF Genomics Class. 2008. The genome of epsilonproteobacterial chemolithoautotroph *Sulfurimonas denitrificans*. Applied and Environmental Microbiology 74:1145-1156

(e) PROFESSIONAL ACTIVITIES

- Cruise Experience: Total of 11 research cruises. Chief scientist on five research cruises to the deep-sea vents at 9°N EPR on R/V *Atlantis* with either *Alvin* (4) or *Jason-II*.
- Organizer of International Symposium on Chemosynthetic-Based Ecosystems ([CBE6](#)) and associated [Morss Colloquium](#) on 40th Anniversary of Discovery of Deep-Sea Vents and Implications for Life on Earth and Elsewhere (Woods Hole, August 2017).
- Organizer or Co-organizer of sessions at several international meetings (ASLO Aquatic Sciences 2001, 2003, 2009, 2013, 2016; Goldschmidt 2009, 2010; ASM General Meeting 2006)
- Associate member of SCOR working group 'Hydrothermal energy transfer and its impact on the ocean carbon cycles'.
- Mentoring: Mentor of 8 postdocs, 3 graduate students (MSc, PhD), and 14 undergraduate summer/guest students. PhD thesis committee member of 8 students.
- Outreach Activities: The research cruises AT26-10, AT26-23, AT37-12 on R/V *Atlantis* with either ROV *Jason-II* or HOV *Alvin*, respectively, involved various outreach efforts targeting K-12. This included a highly successful [Dive & Discover Expedition 15](#) website during AT26-10 with science writer David Levin, the [Dark Life cruise blog](#) during AT26-23 and AT37-12, online blogs and print articles in various Scholastic magazines by Scholastic science writer Jennifer Barone during AT26-10 and AT26-23, and a live feed from the ship to the New Bedford Ocean Explorium Family Night during AT26-10. Sievert further made visits to the New Bedford Ocean Explorium Family Night after AT26-10 and to various school classes in Massachusetts (Falmouth, Foxboro, Lexington) before and after the cruises (Grades 2 – 6). Sievert worked with teacher Lisa Troy on an Engineering Design Challenge related to an instrument developed with NSF funds (Vent-SID) for a 6th grade class at The Sage School in Foxboro, MA. This project was described in a manuscript entitled *Engineering Partnerships: How collaborating with a scientist created an authentic engineering problem* that is going to be published at Science Scope, a journal by the National Science Teachers Association for middle and high school science teachers (<http://www.nsta.org/middleschool/>). Adaptation of PNAS paper for the [Science Journal for Kids](#).